UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 January 2009</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-15</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

This office action is responsive to arguments and amendments made by the

applicant and filed on 01/27/2009.

The applicant amended claims 1, 4, 10, 11, and 13.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-4, 7-13, and 15 rejected under 35 U.S.C. 102 (e) as being anticipated

by Walton et al (US 2004/0082356).

3.   Regarding claim 1, Walton discloses random access data transmission system

using OFDMA (Orthogonal Frequency Division Multiple Access, see abstract line 10

and 2) between a mobile station (e.g. UT) and a base station (e.g. AP, see figure 1), the

mobile station comprising:

a resource selector (e.g. controller, item 780y, see figure 7) for selecting a

preamble transmission channel and a code- related resource for transmitting a

preamble for a random access to the base station (See paragraph [0217], lines 6-9);

a preamble transmitter (e.g. TX Data Processor, item 790y, see figure 7) for

using the transmission resource information selected by the resource selector to

generate a preamble and transmitting the preamble to the base station through a

preamble transmission channel (See [0217], lines 9-13);

a preamble access grant processor (This element is inherent since the function

disclosed in the passage cited below is performed) for receiving acknowledgment or

non- acknowledgment information which includes a scheduling ID (e.g. MAC ID, see

table 14, between [0140] and [0141]) provided by the base station for each preamble in

a preamble access grant from the base station according to the transmission by the

preamble transmitter, and processing the received information (See [0140]); and

a data transmitter (e.g. TX Data and special Processor, items 792y and 790y,

see figure 7) for transmitting random access data through a data transmission channel

(e.g. RACH in table 3 on page 6, note that random access transmission channel could

be also RCH depending on the assigned channel by the AP or base-station sent on the

FCCH in BCH message) associated with the scheduling ID (e.g. MAC ID, see table 6)

assigned to the mobile station based on the information processed by the preamble

access grant processor (See [0118]).

4.   Considering claim 2, Walton teaches the random access data transmission

system of claim 1, wherein the preamble transmitter fixes a specific slot with a preamble

transmittable time from among an uplink frame comprising a plurality of slots (See figure

3B), randomly selects one of sub-channels of a radio resource of the specific slot (See

[0643], lines 3-6), uses a code which is distinguishable from other codes (See [0042],

lines 4-7) , and transmits the preamble generated through the selection of the sub-

channel and usage of the code (See [0107], lines 5-6).

5.   Considering claim 3, Walton teaches the random access data transmission

system of claim 2, wherein the slots of the uplink frame except the slot which is fixed

with the preamble transmittable (See figure 5E, item 532b, note that even though the

preamble slot is variable, it is fixed at a given time until the conditions and

environmental of transmission varies in accordance with Walton's invention) time are

classified as a control information transmission channel and a data transmission

channel (See figure 14B, FCCH is a forward control channel, RCH is the reverse

channel, and RACH is the random access channel which carries uplink data to the AP

or base-station) and random access data are loaded on part of the data transmission

channel and transmitted to the base station (RACH slot is the data transmission channel

carrying random access packets, see figure 14B).

6.   Regarding claim 4, Walton discloses the random access data transmission

system using OFDMA (orthogonal frequency division multiple access) between a mobile

station and a base station, the base station comprising:

        a preamble receiving processor for receiving a preamble from the mobile station

and extracting corresponding preamble information (e.g. Controller, item 730, see figure

7);

        an ID manager for assigning a specific scheduling ID to each preamble sent by

the mobile station and managing the specific scheduling ID (e.g. MAC ID) so that the mobile station may use a assigned data transmission channel associated with said scheduling ID (The ID manager is inherent since the function performed by this element is disclosed, see [0122]);

a scheduler (See figure 7, item 734) for scheduling a data transmission time, and a transmission quantity of the mobile station together with the scheduling ID (e.g. MAC ID) assigned to the mobile station by the ID manager according to channel environments and requirements of the mobile stations (See [0219]);

an access grant (See [0553] lines 1-3) processor for using the preamble information (See [0552] lines 6-9) of the preamble receiving processor and the scheduling ID of the ID manager to determine an acknowledgment/non-acknowledgment status, and transmitting preamble access grant configuring information including the scheduling ID to the mobile station (See [0650] and [0651] lines 1-6); and

a data receiving processor (e.g. RX Data Processor, item 742, see figure 7) for receiving the random access data (See abstract line 10) through a assigned data transmission channel from the mobile station according to a transmission result of the access grant processor, and processing the received random access data (See [0218]).

7.   With respect to claim 8, Walton discloses the random access data transmission system of claim 7, wherein the specific slot is assigned for synchronization (e.g. frame counter, see [0109], lines 1-2 and table 5, note that the synchronization also done by means of the RACH acknowledgment bit slot as shown in table 5) and base station

search (the mobile station is to search based on the assigned channel and ID of the AP, see table 5) and other slots are assigned for downlink traffic slots in the downlink frame (See table 5).

8.   Consider claim 9, Walton discloses the random access data transmission system of claim 8, wherein the downlink traffic slots (having BCH, FCCH, and FCH, see figure 3B) are classified as a data traffic transmission time (e.g. BCH slots, see table 3) and a control signal traffic transmission time (e.g. resource allocation slot or FCCH slot, see table 3) so that the random access data be divided into part of each slot and then be transmitted (See slots RCH 340 and RACH 350 in figure 3B).

9.   Consider claim 10, Walton discloses the random access data transmission method using OFDMA (Orthogonal Frequency Division Multiple Access, see abstract line 10 and 2) between a mobile station (e.g. UT) and a base station (e.g. AP, see figure 1), the method at the mobile station comprising:

        (a) selecting a preamble transmission channel and a transmission radio resource related (the selection is carried by the controller, item 780y, see figure 7) to a code used for transmitting a preamble for a random access to the base station (See paragraph [0217], lines 6-9);

        (b) using the transmission radio resource selected in (a) to generate a preamble and transmitting the preamble to the base station (See [0217], lines 9-13);

        (c) receiving preamble access grant configuring information including a

scheduling ID (e.g. MAC ID, see table 14, between [0140] and [0141]) assigned by the

base station and acknowledgment/ non-acknowledgment information with respect to the

preamble transmitted in (b) (See table 7, RACH acknowledgment of receiving the

preamble and control parameters, see also [0112]), and checking a successful status of

transmission of the preamble, and the scheduling ID (See [0650], note that scheduling

ID or MAC ID is in the preamble); and

> (d) checking an assignment of a data transmission channel associated with the

scheduling ID (See control fields in table 6) by using the mobile station's scheduling ID

included in a control channel (See table 6, MAC ID is in the FCCH which is the control

channel) according to a checking result in (c); and transmitting random access data to

the base station through the data transmission channel assigned to the mobile station

(e.g. RACH in table 3 on page 6, note that random access transmission channel could

be also RCH depending on the assigned channel by the AP or base-station sent on the

FCCH in BCH message).

10.   Consider claim 11, Walton discloses the random access data transmission

method of claim 10, wherein (d) (the step as mentioned above is disclosed in Walton's

invention) comprises extracting transmission control information (e.g. the control

information sent in control channel FCCH from the base-station, see table 8) including

timing (e.g. RCH timing, see table 8), a frequency (e.g. data transfer rate of RCH, see

table 8), and power (e.g. RCH power control, see table 8) through the access grant

information received in (c) (the step as mentioned above is disclosed in Walton's

invention), and transmitting random access data by using the transmission control

information (e.g. by using the information in FCCH the MS sends accordingly in RCH or

the random access reverse channel, the random data to the base-station or AP, see

[0169]).

11.   Regarding claim 12, Walton discloses the random access data transmission

method of claim 10, wherein (b) (the step as mentioned above is disclosed in Walton's

invention) comprises fixing a specific slot with a preamble transmittable time (See

[0146], line 12-13 from among an uplink frame (e.g. RACH is an uplink frame, see

[0144]) including a plurality of slots (See the uplink frame in figure 3B), and transmitting

a preamble generated by randomly selecting any one of the radio resources of the

corresponding slot and using a code (e.g. modulation the preamble according to the

random access transmission scheme, see claim 144) which is distinguishable from

other codes (See claim 77, note that pilot information are part of the preamble

message).

12.   Regarding claim 13, Walton discloses the random access data transmission

method using OFDMA (Orthogonal Frequency Division Multiple Access, see abstract

line 10 and 2) between a mobile station (e.g. UT) and a base station (e.g. AP, see figure

1), the method at the base station comprising:

        (a) receiving and analyzing a preamble transmitted from the mobile station (See.

[0552]), and assigning a specific scheduling ID for each preamble (See [0122]) when

the mobile station can be scheduled (See [0328], lines 6-9);

(b) determining an acknowledgment or a non-acknowledgment (See [0140], lines 5-10) and forming preamble access grant configuring information according to the preamble information analyzed in (a) and an assigned status of the scheduling ID (See table 14, the MAC ID is reserved for a particular MS), and transmitting the preamble access grant configuring information to the mobile station (See [0650] and [0651] lines 1-6);

(c) scheduling (See [0328], lines 6-9) a data transmission time (e.g. RCH length in BCH PDU, see Table 5), a data transmission channel (e.g. the assigned transmission channel, see Control Fields in Table FCCH message), and a transmission quantity of each mobile station (e.g. RCH rate, which is the transmission rate for transmitting random access data at a given time) together with the scheduling ID assigned to each mobile station (See MAC Id in Table 8, also [0122]) according to the mobile station's channel environments and requirements (See [0011], lines 7-10 and see also [0012], lines 7-9), and notifying the mobile station of scheduled results (See [0663], note the notification is done by transmission of the FCH message or PDU); and

(d) receiving random access (see abstract, line 10) data from the mobile station corresponding to the scheduling ID through the data transmission channel determined in (c), and processing the random access data (See [0218] and [0219]).

13.   Regarding claims 7 and 15, Walton discloses the random access transmission system in accordance with claims 4 and 13 respectively, wherein the access grant

processor loads the preamble access grant (See [0552] lines 6-9 and [0553] lines 1-3)

configuring information on a specific slot of a downlink frame (downlink frame or BCH

message, the slots being parameters in table 5 on page 8) comprising a plurality of

slots, and transmits the same to the mobile station (See figure 3B).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
         obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   Claim 5 rejected under 35 U.S.C. 103 (a) as being unpatentable over Walton in

view of Roberts (US 7,248,659).

4.   Regarding claim 5, Walton discloses the random access data transmission

system of claim 4, wherein the preamble information (the preamble contain MIMO

information, see figure 5A) of the preamble receiving processor includes information on

a code (See [0107], lines 4-6), timing (See [0105], lines 1-4, note that the preamble

contains beacon pilot and MIMO pilot information, see figure 5A). Walton further

discloses that information of power used for transmitting the preamble by the mobile

station is included in the control channel in the BCH message to the mobile station for

power assignment. Walton does not teach that the power information is included in the

preamble received. However, Roberts discloses transmitting AGC command or power

information in the preamble in three different modes depending on the desired

conditions (abstract). It would have been obvious to one of ordinary skill in the art to

migrate power information from the FCCH of BCH in Walton's invention to the preamble

as taught by Roberts because in certain conditions where power resources are scarce

such as in battery powered handheld devices, sum of the averaged power

transmissions per charge could be lowered by lowering according to SNR criteria the

transmission power even in the preamble slot periods, thus optimizing power

consumption.

5.   Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Walton in view of Ebrahimi et al (Ebrahimi, USPPA 2003/0046159).

6.   Regarding claims 6 and 14, Walton discloses the random access data

transmission system in accordance with claims 4 and 13 respectively; Walton does not

explicitly teach that the ID manager recovers the scheduling ID assigned to the mobile

station when the data receiving processor finishes reception of the random access data.

However, the examiner provides a reference in the same field of endeavor by Ebrahimi

wherein the ID manager disassociates (e.g. delete after being associated) the

scheduling ID assigned to the mobile station when the data receiving processor finishes

reception of the random access data (See [0037], lines 1-4). It would have been obvious

to one of ordinary skill in the art to add Ebrahimi's limitation to complement Walton's

disclosure in order reduce the amount of processing power that result from the

continuous employment of temporary ID, and progressively storing them in the cache of

the processor- a condition that would contribute to performance degradation. Said

feature would enable the temporary ID to be assigned upon the allocated resources to

the communicating user terminals.

Response to Arguments

Applicant's arguments filed 01/27/2009 have been fully considered but they are

not persuasive.

Regarding the independent claims 1, 4, 10, and 13, the applicant submitted that the scheduling ID as claimed differs from the applied reference. The examiner respectfully diagrees with the argument and the traverse made by the applicant, and provides that the MAC ID as disclosed in the applied reference is a temporary ID, meaning is to be discarded or disposed in a given session (See [0122] and table 8 note that MAC ID is a temporary ID assigned to the user terminal). Furthermore, as previously mentioned in the office action the scheduling of the access point is carried in part by using the temporary MAC ID in the FCCH (See [0117]).

The dependent claims from said aforementioned independent claims inherit the deficiency of the claim in addition to their anticipation by Walton and therefore are rejected as indicated above.

Regarding claims 6 and 14, the examiner provides a secondary reference as requested by the applicant, complementing the obvious limitation as claimed. The argument is moot and therefore claims 6 and 14 are anticipated as indicated above.
In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the ID manager disassociates the scheduling ID) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). The examiner acknowledges the applicant that recovers could not be interpreted by one of ordinary skill in the art as being a disassociation step.

According to Merriam Webster's dictionary, there is no indication that the word recover

is to be explained as or mean the word disassociate.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ISSAM CHAKOUR whose telephone number is (571)

270-5889. The examiner can normally be reached on Monday-Thursday (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Perez Rafael can be reached on (571) 272-7915. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. C. /
Examiner, Art Unit 2617

/Rafael Pérez-Gutiérrez/
Supervisory Patent Examiner, Art Unit 2617